A MICRON **CASE STUDY**

MedVet Credits Micron M510DC SSD With Increasing Their Revenue in a Flash

About MedVet

With offices in Ohio, Louisiana, Alabama, and Kentucky, MedVet Medical & Cancer Centers for Pets treats more than 60,000 dogs and cats every year. MedVet provides emergency services and specialty practices for in-depth care and patient management. It also offers expert, specialized animal care in areas such as anesthesiology, cardiology, interventional radiology, neurology, radiation oncology, and surgical services 24 hours a day, 365 days a year.

The Challenges

The Search for Efficient Image Streaming

At the Columbus MedVet center, the doctors, radiologists and other staff rely heavily on Digital Imaging and Communications in Medicine (DICOM) imaging, the medical standard for high-resolution images from X-rays, ultrasounds, CT scans, and MRI scans. When veterinarians want to view an image, which can be 15MB to 500MB, either they query the database and the images download, or the images open via an image channel that streams them via the local software.

Larger images can take up to 15 seconds to pull up. That delay may seem insignificant, but it can cause noticeable bottlenecks during the day for the radiologist, who might view hundreds of images per day, according to Troy Collins, MedVet's IT director.

Collins said the center had evaluated moving the image stream from the onsite servers onto a cloud service, but tests showed it took five additional seconds to pull up an image when streamed from Amazon Web Service. That would mean each radiologist would be able to read 12 fewer studies per day or 3,600 fewer per year. The Columbus center has five radiologists, so using a cloud-based service would result in 18,000 fewer studies per year. And since MedVet charges an average of $36 per study read, that five-second delay to pull up an image would cost the center $648,000 a year in revenue.

"We decided to keep the DICOM services on premises and see what we might do to improve the performance for obvious reasons," said Collins.

The Solution

Still looking to reduce the image loading time, Collins installed a Micron M510DC 960GB SSD in one of the smaller DICOM servers. The read-optimized M510DC uses flash technology to erase and reprogram in blocks rather than one byte at a time. Enhanced for write-light, read-heavy workloads, the M510DC's design is engineered to excel at workloads such as MedVet's image streaming.

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>
> TROY COLLINS
> *IT Director at MedVet*

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In the past, the cost of SSDs has inhibited some from adopting the technology, but the improved value, performance and reliability from flash-based technology is now encouraging wider use. Collins quickly discovered significant benefits from using SSDs, and the savings they can provide MedVet.

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Micron M510DC SSD: Performance and Value

Several features made Micron's M510DC stand out as an ideal storage strategy for MedVet's critical data requirements. The 2.5-inch M510DC comes with full power-loss protection and is available in four capacities: 120GB, 240GB, 480GB, and 960GB. The M510DC also takes advantage of Micron's XPERT technology—a suite of features engineered into enterprise-grade SSDs that extends the performance, lifespan, and data integrity of the drive.

The Result

Increased Revenue by $160,000+ Per Year

About 25% of the images streamed by MedVet's radiologists are large. Collins figures if the M510DC only improves the streaming time of those images by five seconds, each radiologist will be able to read three more studies per day, 18 more per week, and 900 more per year (six days a week, 50 weeks per year). That would equal an additional 4,500 studies each year among all five radiologists, netting the center an additional $162,000 in potential revenue on just 25% of its work.

The cost of eight 960GB M510DC SSD drives for the DICOM servers would total $5,000. Collins estimates it could cost him eight hours, at $50 per hour, to replace the current RAID 5 with the Micron SSD, for a total investment of $5,400. That means replacing the RAID 5 with the Micron M510DC would net the radiology department alone an additional $156,000 in the first year, and $162,000 additional revenue per year thereafter.

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Leveraging the Benefits of the M510DC for Other Applications

Collins also discovered the M510DC increased throughput by 66% when deploying a Windows workstation with applications from a Windows Deployment Services (WDS) server to a Dell OptiPlex 3010 computer.

"Because it felt too good to be true, we decided to try it a few more times," he said. "We deployed the same OS and applications to six more Dell OptiPlex 3010 computers, and our average time worked out to 12.5 minutes per machine (down from the usual 18 minutes)."

Collins' tests show just how the Micron M510DC can save companies significant time while increasing revenue in a variety of applications. By delivering consistently low latency, high-read performance, endurance, and enterprise date path protection, the high-capacity, easily extendable M510DC is ideal for video on demand, high-speed digital processing, high-speed data, distributed network cache, virtual desktop infrastructure and server virtualization, as well as web serving.

Fast Facts

- **Customer:** MedVet Medical & Cancer Centers for Pets
- **Industry:** Veterinary
- **Primary Contact:** Troy Collins, IT Director
- **Challenges:** Improve the efficiency of image streaming and speed the image loading time of high-resolution images from X-rays, ultrasounds, CT scans, and MRI scans.
- **Solution:** MetVet's DICOM imaging servers using Micron's M510DC SSDs.
- **What Made the Difference:** The improved cost, performance, and reliability of Micron's M510DC SSDs.
- **Result:** Improved streaming time of large images, which increases the number of images that can be read in a day, which increases revenue for MedVet.

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